

REMARKS**I. General**

The issues outstanding in the instant application are as follows:

- The Office Action has indicated that the election made February 27, 2003 was made without traverse;
- Claim 25 stands rejected under 35 U.S.C. 112, first paragraph;
- Claims 1-3, 6-9, 11-14, 26-28, 37-39, 46, 49-51, and 53 stand rejected under 35 U.S.C. 102(b) as anticipated by Terai, Japanese Patent No. 06152301A (hereinafter *Terai*);
- Claims 40-42 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Terai*;
- Claims 10, 22, 24, 43, 44 and 52 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Terai* in view of Russell, U.S. Pat. No. 3,453,564 (hereinafter *Russell*);
- Claim 15 stands rejected under 35 U.S.C. §103(a) as unpatentable over *Terai* in view of Marconi, U.S. Pat. No. 4754,240 (hereinafter *Marconi*); and
- Claim 45 is objected to as being dependent upon a rejected base claim.

Applicants hereby traverse the outstanding rejections of the claims, and request reconsideration and withdrawal of the outstanding rejections in light of the amendments and remarks contained herein. Independent claims 1, 8, 13, 26, 28 and 37 are amended above to indicate that a control signal at an anode of the at least one (shunt) diode is provided via a resistor. Support for this limitation may be found in Figures 2 and 3 as well as at lines 18 and 19 of page 11 of the present specification. Claim 9 has been canceled above. Claim 10 has been amended to place it in independent form. Claim 14 has been amended to correct a typographical error. Claim 25 has been amended to correct inconsistencies introduced by an earlier amendments to claim 22. Support for the amendments to claim 25 can be found in FIGURE 2A. Claims 43 and 52 have been amended to place them in independent form. New claims 54 presents claim 45, in the form indicated as allowable (prior to the above

presented amendments to claim 37), in independent form. No new matter has been added by these amendments. Claims 1-8 10-22 and 24-54 are currently pending in this application, with claims 4, 5, 16-21, 29-36, 47 and 48 presently withdrawn from consideration.

II. Election/Restriction

The Office Action indicates that the February 27, 2003 response to the Restriction Requirement dated January 27, 2003 was made without traverse. However, Applicants wish to respectfully point out that the Election was made with traverse and that Applicants distinctly and specifically pointed out errors in the restriction requirement as required by M.P.E.P. 818.03(c). Clarification by the Examiner is respectfully requested.

III. Rejection un 35 U.S.C. §112

Claim 25 stands rejected under 35 U.S.C. 112, first paragraph. The Office Action provides that “The description of a common anode node of the signal path diodes coupled to the first control signal of claim 25...is not disclosed in the original disclosure and drawings.” In response, Applicants have amended claim 25 to correct inconsistencies introduced by the amendments made to claim 22 in the April 13, 2004 Amendment accompanying the RCE. Support for the amendments to claim 25 can be found in FIGURE 2A. The Examiner may find it helpful to view FIGURE 2A as showing an embodiment encompassed by claims 22-25, wherein first and second control signal inputs are provided at I_2 and I_3 , while a third control signal input is provided at I_1 .

IV. Rejection(s) under 35 U.S.C. §102(e)

Claims 1-3, 6-9, 11-14, 26-28, 37-39, 46, 49-51, and 53 stand rejected under 35 U.S.C. 102(b) as anticipated by *Terai*. In response independent claims 1, 8, 13, 26, 28 and 37 are amended above to indicate that a control signal at an anode of the at least one (shunt) diode is provided via a resistor. Support for this limitation may be found in FIGURES 2 and 3, as well as at lines 18 and 19 of page 11 of the present specification.

The recited reference does not teach all claimed limitations.

It is well settled that to anticipate a claim, the reference must teach every element of the claim, see M.P.E.P. §2131. Moreover, in order for a prior art reference to be anticipatory under 35 U.S.C. § 102 with respect to a claim, “[t]he elements must be arranged as required by the claim,” see M.P.E.P. § 2131, citing *In re Bond*, 15 US.P.Q.2d 1566 (Fed. Cir. 1990). Applicants respectfully assert that the rejection does not satisfy at least these requirements.

Independent claim 1, as amended, recites “wherein the predetermined network configuration provides ... a control signal at an anode of the at least one shunt diodes via a resistor.” Similarly, independent claim 8, as amended, recites “wherein ... a control signal is provided at an anode of said third and fourth diodes via a resistor.” Independent claim 13, as amended, recites “wherein the predetermined network configuration provides ... a control signal at an anode of said third and fourth diodes via a resistor.” Independent claim 26, as amended, recites “an anode of said third diode and an anode of said fourth diode coupled to said second control signal input via a resistor.” Independent claim 28, as amended, recites “wherein an anode of at least one diode of said plurality of diodes is coupled to said second control signal input via a resistor.” Finally, independent claim 37, as amended recites “providing a second attenuation control signal input coupled to an anode of at least one diode of said at least two shunt diodes via a resistor.”

Applicants respectfully contend that *Terai* fails to teach a control signal being provided at an anode of at least one (shunt) diode via a resistor. FIGURE 1 of *Terai* shows replacement of all of resistors 3 of FIGURE 1 with high frequency coke coils 13, including those disposed between signal input “B” and shunt diodes 12c and 12d. In contrast, the present specification at page 11, lines 3-6 provides that “by employing a configuration in which a minimum number of inductors are used (three in the preferred embodiment) frequency disturbances caused by such inductors is further minimized.” As will be appreciated upon inspection of at least FIGURES 2 and 3, steering resistors R1₂ and R2₂ may be employed in the present invention between a signal input and the anodes of the shunt resistors to provide the aforementioned configuration in which a minimum number of inductors are used to minimize frequency disturbances. Regardless, *Terai* does not teach the variously claimed control signals at an anode of at least one (shunt) diode being provided via a resistor. Therefore, Applicants respectfully assert that at least for the above reasons

independent claims 1, 8, 13, 26, 28 and 37, as amended, are patentable over the 35 U.S.C. § 102 rejection of record. Furthermore, there are great differences between the claim and the prior art of record, and a person of ordinary skill in the art considering the prior art would not find these differences obvious.

Claims 2, 3, 6 and 7, ultimately depend from independent claim 1; claims 11 and 12 ultimately depend from independent claim 8; claims 14 and 49-51 ultimately depend from independent claim 13; claim 27 depends from independent claim 26; claim 53 depends from independent claim 28; and claims 38, 39 and 46 ultimately depend from independent claim 37. Thereby, each of dependent claims 2, 3, 6, 7, 11, 12, 14, 27, 38, 39, 46, 49-51 and 53 inherit all limitations of their respective base claims 1, 8, 13, 26, 28 or 37. Therefore each of claims 2, 3, 6, 7, 11, 12, 14, 27, 38, 39, 46, 49-51 and 53 set forth features and limitations not recited by *Terai*. Thus, Applicants respectfully assert that for at least the reasons advanced above in addressing the anticipation rejection of independent claims 1, 8, 13, 26, 28 and 37, claims 2, 3, 6, 7, 11, 12, 14, 27, 38, 39, 46, 49-51 and 53 are patentable over the 35 U.S.C. § 102 rejection of record.

V. Rejections under 35 U.S.C. §103(a)

A. Claims 15 and 40-42

Claim 15 stands rejected under 35 U.S.C. §103(a) as unpatentable over *Terai* in view of *Marconi* and claims 40-42 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Terai*. However, in light of the amendments made to independent claims 13 and 37 presented above, the combination of *Terai* and *Marconi* fails to disclose all limitations of claim 15 and the modification to *Terai* fails to disclose all limitations of claims 40-42. Claim 15 depends directly from independent claim 13 and claims 40-42 ultimately depend from independent claim 37. Independent claims 13 and 37, as amended, define limitations described above in addressing their anticipation rejections. As discussed above, *Terai* fails to disclose limitations of independent claims 13 and 37. The Office action does not allege that the relied knowledge in the art, or the *Marconi* reference, teach the control signal at an anode of the at least one (shunt) diode being provided via a resistor limitations of amended independent claims 13 and 37. Therefore, the modifications to *Terai* and the combination of references cited by the Office Action do not teach all elements of the claimed invention. Thus,

Applicants respectfully assert that at least for the reasons advanced above in responding to the anticipation rejections of independent claims 13 and 37, dependent claims 15, and 40-42 are patentable over the 35 U.S.C. § 103(a) rejection of record.

B. Claims 10, 22, 24, 43, 44 and 52

Claims 10, 22, 24, 43, 44 and 52 stand rejected under 35 U.S.C. §103(a) as unpatentable over *Terai* in view of *Russell*. Applicants respectfully traverse this rejection.

A Prima Facie case of obviousness has not been established.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. §2143. Without conceding the first or second criteria, Applicants respectfully asserts that the rejection does not satisfy the third criteria.

The recited combination does not teach or suggest all claimed limitations.

In addressing claims 10, 22, 24, 43, 44 and 52, the Office Action admits that *Terai* does not teach that the shunt diodes have a separate control circuit. The Office Action attempts to cure this deficiency by introducing *Russell*, stating “Russell (e.g. Fig. 9) teaches using separate control circuits for each shunt diode.” However, the combination of *Terai* and *Russell* does not teach or suggest all limitations of the claimed invention.

Now independent claim 10 recites “an anode of said third diode is coupled to a second control signal and an anode of said fourth diode is coupled to a third control signal.” Independent claim 22 recites “wherein at least one diode of said plurality of diodes is a shunt diode with an anode coupled to said first control signal input and wherein an anode of at least one other shunt diode of said plurality of diodes is coupled to said second control signal input.” Now independent claim 43 recites “providing a second attenuation control signal input coupled to an anode of a first of said at least two shunt diodes; providing a third attenuation control signal input coupled to an anode of a second of said at least two shunt

diodes.” Now independent claim 52 defines “wherein an anode of said third diode is coupled to said second control signal, wherein an anode of said fourth diode is coupled to a third control signal.”

Russell does not disclose the above recited limitations of independent claims 10, 22, 43, and 52. As shown in FIGURE 9 of *Russell*, biasing signals provided at 99a-99h, 101a and/or 101b are provided to a cathode of diodes 98a-98 h, 100a and/or 100b. In contrast, upon review of FIGURE 2A of the present application it will be seen that control signals I_1 , I_2 and I_3 are provided via control input ports SP_1 , SP_2 , and SP_3 to anodes of various diodes, as recited by the above quoted independent claims 10, 22, 43 and 52. Thus, the combination of *Terai* and *Russell* does not teach the variously claimed limitations addressing provision of separate control signals to anodes of (shunt) diodes. Therefore, Applicants respectfully assert that for at least the above reasons independent claims 10, 22, 43 and 52 are patentable over the 35 U.S.C. § 103(a) rejection of record.

Claim 24 depends directly from independent claim 22 and claim 44 depends directly from now independent claim 43. Thereby, each of claims 24 and 44 inherit all limitations of their respective base claims. Therefore, for at least the reasons advanced above in addressing the obviousness rejections of independent claims 22 and 43, each of claims 24 and 44 set forth features and limitations not recited by the combination of *Terai* and *Russell*. Thus, Applicants respectfully assert that for at least the above reasons claims 24 and 44 are also patentable over the 35 U.S.C. § 103(a) rejection of record.

VI. Conclusion

For at least the reasons given above, Applicants respectfully submit that the pending claims, distinguish over the prior art under 35 U.S.C. §§ 102 and 103, and meet the requirements of 35 U.S.C. §112. Accordingly, Applicants submit that this application is in full condition for allowance and the Examiner is respectfully requested to pass this application to issue.

Applicant believe all fees due with this response are appropriately dealt with in the accompanying Transmittals. However, if an additional fee is due, please charge Deposit Account No. 06-2380, under Order No. 49581/P030US/10104106 from which the undersigned is authorized to draw. Applicants respectfully request that the Examiner call the below listed attorney if the Examiner believes that he can be of assistance in resolving any remaining problems or otherwise expediting prosecution the present application.

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Respectfully submitted,

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